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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,452	02/15/2002	Yoshikazu Takahashi	111635	8743

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EXAMINER

NGUYEN, JUDY

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 09/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/075,452

Applicant(s)

TAKAHASHI, YOSHIKAZU

Examiner

Judy Nguyen

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-21 is/are allowed.
- 6) ☒ Claim(s) 22-27 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 28-30 and 34 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

Claim 30 is objected to because of the following informalities: fourth and third electrodes lack proper antecedent basis. It is believed that that this claim should depend on claim 26 because claim 26 recites fourth and third electrodes. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

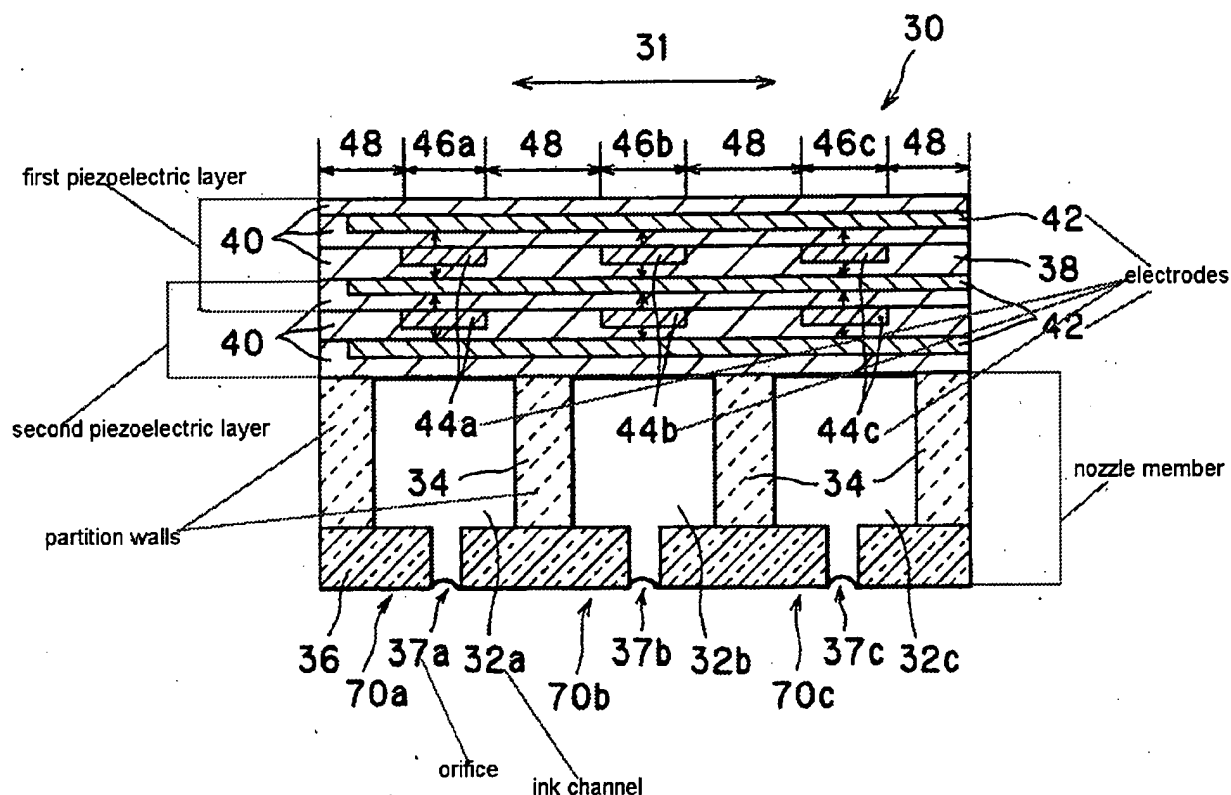
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22, 23, 31, 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al (US 5,402,159).

Takahashi et al discloses all features of the claimed invention as clearly illustrated below.

FIG. 3



Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 22-27, 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischbeck et al (US 4,825,227) in view of Takahashi et al (US 5,266,964).

Fischbeck et al discloses all features of the claimed invention except for the followings:

- The first and second piezoelectric layers as defined in the claims.

However, Takahashi et al discloses the followings:

- An actuator (38) having first and second piezoelectric layers (40) as defined in the claims (clearly illustrated).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the actuator 17 of Fischbeck et al with the actuator 38 of Takahashi et al for the purpose providing the necessary strength of the piezoelectric element without decreasing the displacement amount.

Allowable Subject Matter

Claims 1-21 are allowed.

Claims 28-30, 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:


- With respect to claims 1-21, the first area polarized perpendicularly to the laminating direction and the second area polarized parallel to the laminating direction in combination as claimed cannot be made inherent or obvious by the prior art of record.
- With respect to claims 28 and 29, the first piezoelectric layer being polarized in directions perpendicular to the laminating direction, and the directions of polarization centered on the second electrode and toward the first electrodes in combination as claimed cannot be made inherent or obvious by the prior art of record.
- With respect to claims 30 and 34, the fifth electrode electrically connected to the first and fourth electrodes by through-holes and the sixth electrode electrically connected to the second and third electrodes by through-holes in combination as claimed cannot be made inherent or obvious by the prior art of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judy Nguyen whose telephone number is (703) 305-7062. The examiner can normally be reached on Monday - Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ben Fuller can be reached on (703) 308-0079. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Judy Nguyen
Primary Examiner
August 27, 2003